Contents lists available at JEMACA

Journal of Economics, Management, Accounting and Computer Applications

journal homepage: https://jemaca.aks.or.id/index.php/jemaca/index

An In-Depth Investigation of Investor Decision-Making and Cryptocurrency Market Dynamics

Laeli Masruroh[a], Ray Octafian[b]
[a,b]*STIEPARI Semarang, Indonesia*

Article Info

Keywords:

Cryptocurrency
Decision-Making
Investor
Market

ABSTRACT

This study aims to analyze the factors influencing cryptocurrency investment decisions, identify effective risk management strategies, and investigate the impact of institutional investment on the cryptocurrency market. Using a qualitative approach with semi-structured interviews involving eight experienced crypto investors, the research found that psychological factors such as FOMO (Fear of Missing Out) and herd mentality significantly affect investment decisions, with 87.5% of participants exhibiting both biases. Although all participants (100%) were aware of the high risks of crypto investments, there was a clear gap between risk awareness and the implementation of adequate risk management strategies, with only 50% using stop-loss orders and 62.5% still relying on informal, intuition-based approaches. Portfolio diversification (87.5%) and dollar-cost averaging (75%) were the most commonly applied strategies. Institutional investor involvement has increased market legitimacy (100%) and stability (75%) but has also raised concerns about higher correlation with traditional financial markets (62.5%) and potential price manipulation (62.5%). This study identifies a significant educational gap, particularly in risk assessment and regulatory understanding, emphasizing the importance of financial education and technological literacy in the cryptocurrency investment environment.

This is an open access article under the CC BY-SA license.

Corresponding Author:

Ray Octafian
Management
STIEPARI Semarang
Email: rayoctafian@stiepari.ac.id

1. INTRODUCTION

Cryptocurrency investment has become one of the most discussed topics in the financial world over the past decade. Since Bitcoin was first introduced by Satoshi Nakamoto in 2009, cryptocurrency has evolved from an experimental idea into one of the most traded asset classes globally. In 2021, the total market capitalization of cryptocurrencies surpassed $2 trillion and is expected to continue growing with the expanding adoption of blockchain technology [1], [2]. This has attracted attention from both individuals seeking new ways to invest and large institutions that are beginning to add cryptocurrencies to their portfolios.

The growth of the cryptocurrency market can be understood through Modern Portfolio Theory (MPT), traditional financial theories, and technology adoption models. MPT provides a framework for understanding how cryptocurrency fits within a diversified investment portfolio[3], [4]. The low correlation between cryptocurrency and traditional asset classes initially made it attractive for portfolio diversification, potentially improving the risk-return profile of investors' portfolios. However, as institutional adoption increases, these correlation patterns continue to evolve, necessitating further research.

Traditional financial theories assume rational decision-making, but behavioral finance recognizes that psychological factors significantly influence investment decisions. Prospect theory explain why investors may exhibit risk-seeking behavior in cryptocurrency markets despite high volatility[5], [6]. The cryptocurrency market, with its extreme price movements, serves as a prime example of how fear, greed, and herd mentality can drive market behavior beyond fundamental valuations.

Frameworks such as the Technology Acceptance Model and Diffusion of Innovation Theory help explain the adoption patterns of cryptocurrency as both a technology and an investment instrument[7], [8]. The current cryptocurrency market represents the transition between early adopters and the early majority, with significant implications for future growth prospects and market stability..

Although cryptocurrency offers promising potential, investing in it also faces various risks and challenges. Extreme price volatility, regulatory uncertainty, and security threats are some of the main issues that investors must contend with. Bitcoin's price volatility, for example, can reach as high as 10% within 24 hours, indicating significant market instability [9]–[11]. Regulatory uncertainty is also a major concern, as many developing countries still lack clear laws to address cryptocurrency. In addition, cases of fraud and hacking related to cryptocurrency often make headlines, with losses exceeding $14 billion in 2021[12]–[14].

Despite the extensive research conducted on cryptocurrency, there are still research gaps that need to be addressed. First, very little research has been done on the behavioral psychology of crypto investments, particularly how emotions and risk perceptions shape investor decisions[15]–[18]. Second, further research is needed to identify and develop effective risk management strategies for investors dealing with high market volatility and security risks[13], [14], [19], [20]. Third, the impact of institutional investment on the cryptocurrency market also requires further investigation[21]–[23].

Current data and trends indicate the prospects and risks associated with investing in cryptocurrency. A survey reported that 76% of corporate executives consider cryptocurrency an important part of their business strategy over the next five years[24]–[26]. However, a Pew Research Center survey states that only 16% of adults in the US consider cryptocurrency a safe investment[27], [28]. In Indonesia, around 3% of the population has made this investment, with growing interest as education and understanding improve.

Considering the potential, risks, and existing research gaps, it is important to conduct further analysis of cryptocurrency investment. This study aims to examine the factors that influence investment decisions, identify effective risk management strategies, and investigate the impact of institutional investment on the cryptocurrency market. The research results are expected to provide deeper understanding and guidance for investors navigating the complex world of cryptocurrency.

2. RESEARCH METHOD

This study employs a qualitative research approach to explore the complex and multifaceted nature of cryptocurrency investment behavior. Qualitative methodology was selected because it allows for deep exploration of investors' subjective experiences, perceptions, and decision-making processes in the cryptocurrency market context. This approach is particularly appropriate for investigating phenomena that are relatively new and not yet fully understood, as is the case with cryptocurrency investment [23]. The research design follows an interpretive paradigm, acknowledging that reality is socially constructed and that understanding human behavior requires examining the meanings that individuals attribute to their actions and experiences.

The primary data collection method consists of in-depth, semi-structured interviews with cryptocurrency investors. This technique was chosen for its flexibility, allowing the researcher to adapt questions based on participant responses while maintaining focus on the research objectives. Each interview session lasted between 60 to 90 minutes and was conducted either face-to-face or via secure video conferencing platforms to accommodate participants' preferences and geographical constraints. All interviews were audio-recorded with participants' consent and later transcribed verbatim to ensure accuracy in data analysis.

The interview protocol was developed based on a comprehensive literature review and focused on three main areas: (1) psychological factors influencing investment decisions, including risk perception, emotional responses, and cognitive biases; (2) risk management strategies employed by investors; and (3) perceptions regarding institutional investment in the cryptocurrency market. The protocol included both open-ended questions to encourage detailed responses and probing questions to clarify and deepen understanding of participants' experiences. Prior to full implementation, the interview protocol was pilot-

tested with two cryptocurrency investors who met the inclusion criteria but were not included in the final sample, allowing for refinement of questions and identification of potential issues.

Participant selection followed a purposive sampling approach, targeting individuals with substantial experience in cryptocurrency investment. The specific inclusion criteria required participants to have at least two years of active experience investing in cryptocurrencies, a diverse portfolio including at least three different cryptocurrencies, and self-reported knowledge of blockchain technology fundamentals. These criteria ensured that participants possessed sufficient experience and knowledge to provide informed insights into the research questions. Recruitment occurred through cryptocurrency investment communities, professional networks, and snowball sampling, where existing participants referred other potential participants.

The final sample consisted of 8 participants, at which point theoretical saturation was achieved—no new significant themes or insights emerged from additional interviews. Participants represented diverse demographic backgrounds, investment approaches, and experience levels (ranging from 2 to 8 years of cryptocurrency investment experience), enhancing the richness and transferability of the findings. The sample included 6 male and 2 female investors, with ages ranging from 25 to 52 years, and educational backgrounds spanning finance, computer science, business, and humanities.

Data analysis followed a thematic analysis approach as described by Braun and Clarke (2006). This process involved six steps: (1) familiarization with the data through repeated reading of transcripts; (2) generating initial codes to identify meaningful segments of data; (3) searching for themes by grouping related codes; (4) reviewing themes for coherence and distinctiveness; (5) defining and naming themes; and (6) producing the final analysis with compelling extract examples. To enhance analytical rigor, the researcher employed an iterative process, moving between data, codes, and emerging themes throughout the analysis.

To ensure trustworthiness and credibility of findings, several validation strategies were implemented. These included member checking, where preliminary findings were shared with selected participants for feedback; peer debriefing, involving regular discussions with colleagues knowledgeable about cryptocurrency or qualitative methods; and maintenance of a reflexive journal documenting methodological decisions and personal reflections throughout the research process. Additionally, the researcher practiced bracketing by explicitly acknowledging preconceptions about cryptocurrency investment to minimize their influence on data interpretation.

All participants provided informed consent after receiving detailed information about the study's purpose, procedures, and how their data would be used. Confidentiality was maintained by using pseudonyms in all research documents and securely storing data according to institutional guidelines. Participants were informed of their right to withdraw from the study at any point without consequences, and were offered the opportunity to review their interview transcripts for accuracy.

3. RESULTS AND DISCUSSION

3.1 Results

This qualitative research involved 8 cryptocurrency investors who met the established criteria. Table 1 presents the demographic characteristics of the participants.

Table 1. Demographic Profile of Research Participants

Characteristic	Category	Frequency (n=8)	Percentage (%)
Gender	Male	6	75.0
	Female	2	25.0
Age	25-30 years	3	37.5
	31-40 years	4	50.0
	41-52 years	1	12.5
Educational Background	Finance/Economics	3	37.5
	Computer Science/IT	2	25.0
	Business/Management	2	25.0
	Other	1	12.5
Investment Experience	2-3 years	3	37.5
	4-5 years	4	50.0
	6-8 years	1	12.5
Portfolio Size	< $1,000	2	25.0
	$1,000 - $5,000	4	50.0
	> $5,000	2	25.0

Source: Research Findings, 2025

The thematic analysis of interview data revealed several key psychological factors that influence cryptocurrency investment decisions. Table 2 shows the frequency of different psychological factors mentioned by participants.

Table 2. Psychological Factors Influencing Investment Decisions

Psychological Factor	Frequency (n=8)	Percentage (%)	Representative Quote
Fear of Missing Out (FOMO)	7	87.5	"When Bitcoin reached $50,000, I invested more despite knowing it was risky. I couldn't bear the thought of missing out on potential profits."
Risk Perception	8	100.0	"I'm fully aware cryptocurrency is high-risk, but I believe the potential returns justify the volatility."
Confirmation Bias	6	75.0	"I tend to follow Reddit communities and Twitter accounts that support my existing views on crypto. I realize I might be filtering contradictory information."
Overconfidence	5	62.5	"After making high returns in 2021, I felt I had mastered the market. That overconfidence led to significant losses when the market crashed."
Regret Aversion	5	62.5	"I held onto falling assets longer than I should have because I couldn't accept the loss. I kept hoping they would recover."
Herd Mentality	7	87.5	"When I see people around me making money on a particular token, it's difficult not to follow suit, even when I haven't done my own research."

Source: Research Findings, 2025

Participants employed various risk management strategies with different levels of structure and sophistication. Table 3 details the risk management approaches identified through the research.

Table 3. Risk Management Strategies Employed by Investors

Risk Management Strategy	Frequency (n=8)	Percentage (%)	Level of Structure	Representative Quote
Portfolio Diversification	7	87.5	High	"I never allocate more than 15% of my portfolio to any single cryptocurrency, regardless of how promising it seems."
Dollar-Cost Averaging (DCA)	6	75.0	High	"I invest a fixed amount every month, regardless of price. This has helped me avoid the stress of trying to time the market."
Stop-Loss Orders	4	50.0	Medium	"I set automated stop-losses at 20% below purchase price for all my crypto holdings to limit potential downside."
Technical Analysis	3	37.5	Medium	"I use moving averages and RSI indicators to inform my entry and exit points in the market."
Fundamental Analysis	3	37.5	Medium	"I evaluate tokenomics, team credentials, and real-world use cases before investing in any project."
Informal/Intuition-Based	5	62.5	Low	"I follow my gut feeling and advice from crypto communities. It's worked well enough for me so far."
Cold Storage Security	6	75.0	High	"I keep 70% of my holdings in hardware wallets disconnected from the internet to protect against hacking."
Regular Profit Taking	5	62.5	Medium	"I withdraw 50% of my profits when an asset doubles in value to secure gains while maintaining exposure."

Source: Research Findings, 2025

Participants shared varied perspectives on how institutional investors affect the cryptocurrency market. Table 4 summarizes these perceptions.

Table 4. Perceived Impact of Institutional Investment

Impact Category	Positive/Negative	Frequency (n=8)	Percentage (%)	Representative Quote
Market Legitimacy	Positive	8	100.0	"When companies like Tesla and MicroStrategy began investing in Bitcoin, it validated my belief in cryptocurrency's long-term potential."
Market Stability	Positive	6	75.0	"Institutional investors typically have longer holding periods, which has reduced day-to-day volatility."
Traditional Market Correlation	Negative	5	62.5	"Since institutional investors entered, crypto now follows stock market patterns more closely, reducing its appeal as a hedge against traditional finance."
Price Manipulation	Negative	5	62.5	"Large institutions can move the market at will. This makes it harder for individual investors like me to predict price movements."
Accessibility	Positive	4	50.0	"The entry of institutional players has led to better exchanges, more reliable platforms, and improved user experience."
Regulatory Development	Mixed	7	87.5	"Institutional involvement has accelerated regulatory clarity, which is good long-term but has created short-term uncertainty."

Source: Research Findings, 2025

The research identified significant educational gaps and needs among cryptocurrency investors. Table 5 outlines these findings.

Table 5. Educational Gaps and Needs Among Cryptocurrency Investors

Educational Need	Importance Rating (1-5)*	Current Knowledge Level (1-5)*	Knowledge Gap	Representative Quote
Blockchain Technology Fundamentals	4.6	3.1	1.5	"Most investors I know can't explain how blockchain works beyond the basics, yet they're investing significant amounts."
Tokenomics	4.4	2.7	1.7	"Understanding supply mechanisms, distribution, and economic models is crucial but often overlooked by new investors."
Security Practices	4.8	3.3	1.5	"Many still keep their assets on exchanges without understanding the risks or implementing proper security measures."
Risk Assessment	4.7	2.4	2.3	"There's a widespread inability to properly evaluate risk-reward ratios in crypto investments compared to traditional assets."
Regulatory Knowledge	4.2	2.0	2.2	"Most investors don't understand the tax implications of their crypto transactions until they face unexpected tax bills."
Market Cycle	4.5	2.6	1.9	"Few recognize the cyclical nature

Analysis	of crypto markets or know how to adjust their strategies accordingly."

*Rating scale: 1 = Very Low, 5 = Very High (Average ratings from participant responses)
Source: Research Findings, 2025

3.2 Discussion

1. Psychological Factors Play a Crucial Role in Cryptocurrency Investment Decisions

The research results show that psychological factors significantly influence investment decision-making in the cryptocurrency market. As shown in Table 2, Fear of Missing Out (FOMO) affects 87.5% of participants (7 out of 8), making it a dominant factor driving many investors to enter positions without adequate analysis. This finding aligns with Kahneman and Tversky's Prospect Theory, which explains how emotions can override rational decision-making in uncertain conditions. The cryptocurrency market, characterized by extreme volatility and rapid price movements, creates an environment where emotional responses are amplified.

Risk perception analysis revealed an interesting paradox among participants. While all participants (100%) acknowledged the high-risk nature of cryptocurrency investments, many demonstrated a disconnection between perceived risk and risk management behavior. For instance, only 50% regularly used stop-loss orders, suggesting that cognitive understanding of risk does not always translate to practical risk management implementation. This disconnect can be explained through cognitive dissonance theory, where investors reconcile contradictory beliefs by rationalizing their decisions despite recognizing the risks involved.

Confirmation bias emerged as another significant factor, affecting 75% of participants (6 out of 8). The digital ecosystem surrounding cryptocurrency, with its numerous online communities and social media channels, creates echo chambers that reinforce existing beliefs. This tendency to seek information that confirms pre-existing views while discounting contradictory evidence leads to imbalanced investment decisions and potential blind spots in risk assessment. The high prevalence of confirmation bias is particularly concerning because it can lead to investment bubbles when reinforced across investor communities.

Overconfidence bias was observed in 62.5% of participants (5 out of 8), often following periods of market gains. This psychological bias leads investors to overestimate their knowledge and ability to predict market movements after experiencing success, which they frequently attribute to skill rather than market conditions or luck. The consequences of overconfidence were especially evident among those who experienced significant losses during market downturns after periods of success.

The research also identified that 87.5% of participants (7 out of 8) exhibited herd mentality, following investment trends based on social consensus rather than independent analysis. This finding supports the Social Proof Theory proposed by Cialdini, which suggests that individuals look to others for guidance on behavior in uncertain situations. The cryptocurrency market, with its complex technology and uncertain fundamentals, creates an environment where social proof becomes a dominant decision-making heuristic.

These psychological factors collectively create a complex decision-making landscape that often leads to suboptimal investment outcomes. The findings suggest that cryptocurrency investors would benefit from greater awareness of these psychological biases and the development of structured approaches to mitigate their negative effects.

2. Risk Management Strategies Vary Among Investors

Analysis of risk management practices revealed significant variation in approaches, with different levels of structure and sophistication. Portfolio diversification was the most widely adopted strategy, implemented by 87.5% of participants (7 out of 8). However, the research identified considerable differences in how diversification was applied. Some participants maintained highly diversified portfolios across various cryptocurrency categories (store of value, utility tokens, DeFi, etc.), while others focused primarily on major cryptocurrencies like Bitcoin and Ethereum, considering this a form of diversification compared to holding just one cryptocurrency.

Dollar-cost averaging (DCA) was employed by 75% of participants (6 out of 8) as a method to mitigate market timing risk and reduce the impact of volatility. This strategy was particularly popular among investors who experienced previous losses from attempting to time market entries and exits. The psychological benefit of DCA was frequently mentioned, with participants noting reduced stress and emotional decision-making when following a predetermined investment schedule regardless of market conditions.

One concerning finding was that 62.5% of participants (5 out of 8) relied on informal or intuition-based approaches to risk management. These investors typically lacked structured methodologies and instead depended on community sentiment, personal intuition, or general market enthusiasm to guide their decisions. This approach correlated strongly with higher reported losses during market downturns and greater emotional distress during high-volatility periods.

The data in Table 3 demonstrates that more sophisticated risk management strategies, such as technical analysis (37.5%) and fundamental analysis (37.5%), were employed by fewer than half of the participants. This suggests a significant knowledge gap in formal investment analysis methods within the cryptocurrency investor community. Participants who employed these more structured approaches reported greater confidence in their decisions and less reactivity to short-term market movements.

Security-focused risk management through cold storage solutions was practiced by 75% of participants (6 out of 8), indicating a high awareness of custodial risks despite gaps in other risk management areas. This suggests that specific, widely publicized risks (such as exchange hacks) receive more attention than systematic investment risks, possibly due to their higher visibility in cryptocurrency media.

Another notable finding was the implementation of regular profit-taking strategies by 62.5% of participants (5 out of 8). These investors established rules for realizing gains, such as withdrawing initial investments once a certain percentage return was achieved or periodically converting a portion of cryptocurrency holdings to fiat currency. This approach helped mitigate the tendency to remain overly committed during market downturns due to unrealized gains from previous periods.

The variability in risk management approaches highlights the need for educational initiatives focused on structured risk assessment and management techniques specifically tailored to the cryptocurrency market's unique characteristics.

3. Institutional Investment Impacts the Cryptocurrency Market

The research revealed complex perceptions regarding institutional investment in the cryptocurrency space. As shown in Table 4, market legitimacy was the most widely recognized positive impact, with 100% of participants (all 8) believing that institutional involvement validated cryptocurrency as an asset class. Many participants referenced specific institutional adoption events, such as MicroStrategy's Bitcoin treasury strategy or Tesla's Bitcoin purchase, as watershed moments that strengthened their confidence in cryptocurrency's long-term viability.

Improved market stability was acknowledged by 75% of participants (6 out of 8) as another positive outcome of institutional involvement. Participants noted reduced day-to-day volatility in major cryptocurrencies like Bitcoin and Ethereum following increased institutional participation. This stability was attributed to institutional investors' typically longer investment horizons and strategic approach to position building, which contrasts with the more speculative behavior often observed among retail investors.

However, 62.5% of participants (5 out of 8) identified increased correlation with traditional financial markets as a negative consequence of institutional investment. Many early cryptocurrency investors were attracted by the asset class's perceived independence from conventional financial systems. The strengthening correlation between cryptocurrency and traditional markets, particularly during the 2022 market downturn, reduced this diversification benefit. Several participants expressed disappointment that cryptocurrency was increasingly "behaving like tech stocks" during periods of market stress.

Concerns about price manipulation were raised by 62.5% of participants (5 out of 8), who believed large institutional investors could influence market movements to their advantage. This perception was especially strong among participants with smaller portfolios, who felt disadvantaged by their inability to access the same information or trading capabilities as institutional players. Some participants pointed to unusual market movements preceding major news announcements as evidence of potential information asymmetry favoring institutional investors.

The development of regulatory frameworks was viewed with mixed sentiment. While 87.5% of participants (7 out of 8) recognized the need for regulatory clarity for long-term market health, many expressed concerns about how regulations might be implemented and whether they would favor institutional players at the expense of individual investors. This ambivalence reflects the cryptocurrency community's complex relationship with regulation – acknowledging its necessity while remaining cautious about potential overreach.

These findings suggest that while institutional involvement has brought credibility and stability to the cryptocurrency market, it has also fundamentally altered its characteristics in ways that challenge some of the original value propositions that attracted early adopters.

4. Financial Education and Literacy are Key to Navigating the Cryptocurrency Market

The research identified significant educational gaps among cryptocurrency investors, as detailed in Table 5. The largest knowledge deficit was in risk assessment, with a gap of 2.3 points between perceived importance (4.7/5) and current knowledge levels (2.4/5). This finding explains the prevalence of unstructured risk management approaches identified earlier and highlights a critical area for educational intervention.

Regulatory knowledge represented the second-largest knowledge gap (2.2 points), with most participants acknowledging limited understanding of tax obligations, compliance requirements, and legal considerations related to cryptocurrency investment. This gap is particularly concerning given the evolving regulatory landscape and the potential financial and legal consequences of non-compliance.

Market cycle analysis showed a knowledge gap of 1.9 points, with participants recognizing the importance of understanding cyclical patterns (4.5/5) but reporting limited ability to identify and respond to different market phases (2.6/5). This deficit contributes to emotional decision-making during extreme market conditions and hinders the development of counter-cyclical investment strategies that could improve long-term performance.

Tokenomics knowledge showed a gap of 1.7 points, with many participants investing in projects without thoroughly understanding the economic models underlying different cryptocurrencies. This gap is significant because tokenomics fundamentally determines a cryptocurrency's value proposition, inflation rate, and long-term sustainability.

Both blockchain technology fundamentals and security practices showed knowledge gaps of 1.5 points. While these were the smallest gaps identified, they remain significant given their foundational importance to cryptocurrency investment. The research found that many investors had superficial understanding of blockchain technology despite its centrality to the assets they were purchasing, and security knowledge often consisted of following prescriptive advice without comprehending the underlying principles.

The educational needs identified through this research suggest that comprehensive educational initiatives are required to address these knowledge gaps. Such initiatives should focus not only on technical aspects of cryptocurrency but also on investment principles, risk management, and regulatory compliance. The findings indicate that improved financial literacy would lead to more structured investment approaches, better risk management, and potentially improved outcomes for cryptocurrency investors.

4. CONCLUSION

This study reveals that cryptocurrency investment is heavily influenced by psychological factors, with FOMO and herd mentality dominating investors' decision-making processes. Although all participants acknowledged the high risks of crypto investments, there is a clear gap between risk awareness and the implementation of adequate risk management strategies. Portfolio diversification and dollar-cost averaging are the most commonly applied strategies, yet many investors still rely on informal, intuition-based approaches to manage risk. Institutional investor involvement has enhanced the legitimacy and stability of the crypto market but has also raised concerns about correlation with traditional financial markets and potential price manipulation. A significant educational gap has been identified, particularly in risk assessment and regulatory understanding, highlighting the importance of comprehensive educational initiatives. Investors who implement structured risk management strategies and possess a deep understanding of blockchain technology report more positive investment experiences and greater resilience during market volatility. Future research should adopt a longitudinal approach to understand the evolution of investor behavior across different market cycles and develop a specialized risk management framework for digital assets.

REFERENCES

[1] M. Abubakar, M. K. Hassan, dan M. A. Haruna, "Cryptocurrency tide and islamic finance development: Any issue?," *International Finance Review*, vol. 20. hal. 189–200, 2019, doi: 10.1108/S1569-376720190000020019.

[2] S. K. Agyei *et al.*, "Does volatility in cryptocurrencies drive the interconnectedness between the cryptocurrencies market? Insights from wavelets," *Cogent Econ. Financ.*, vol. 10, no. 1, 2022, doi: 10.1080/23322039.2022.2061682.

[3] Y. Chaiyarit, "Comparative Analysis of Cryptocurrency Portfolio Strategies Integrating Esg Criteria Across Market Conditions and Time Periods," *Rev. Gest. Soc. e Ambient.* , vol. 18, no. 9, 2024, doi: 10.24857/rgsa.v18n9-112.

[4] A. Jayawardhana dan S. R. N. Colombage, "Portfolio diversification possibilities of cryptocurrency: global evidence," *Appl. Econ.*, vol. 56, no. 47, hal. 5618–5633, 2024, doi: 10.1080/00036846.2023.2257928.

[5] E. Bertuah dan I. Sakti, "the Financial Performance and Macroeconomic Factors in Forming Stock Return," *Jurnal Riset Manajemen dan Bisnis (JRMB) Fakultas Ekonomi UNIAT*, vol. 4, no. S1. core.ac.uk, hal. 511–522, 2019, [Daring]. Tersedia pada: https://core.ac.uk/download/pdf/270203152.pdf.

[6] R. Chen, "Explaining cryptocurrency returns: A prospect theory perspective," *J. Int. Financ. Mark. Institutions Money*, vol. 79, 2022, doi: 10.1016/j.intfin.2022.101599.

[7] C. M. Yee, "A Review on Factors Influencing Online Financial Management Ability Among College Students," *Int. J. Manag. Account. …*, 2022, [Daring]. Tersedia pada: https://ojs.unirazak.edu.my/index.php/image/article/view/27%0Ahttps://ojs.unirazak.edu.my/index.php/image/article/download/27/24.

[8] N. Sagheer, "Factors Affecting Adaptability of Cryptocurrency: An Application of Technology Acceptance Model," *Front.*

Psychol., vol. 13, 2022, doi: 10.3389/fpsyg.2022.903473.
[9] M. Akhtaruzzaman, A. Sensoy, dan S. Corbet, "The influence of Bitcoin on portfolio diversification and design," *Financ. Res. Lett.*, vol. 37, 2020, doi: 10.1016/j.frl.2019.101344.
[10] B. Y. Al-mansour, "Cryptocurrency Market: Behavioral Finance Perspective*," *J. Asian Financ. Econ. Bus.*, vol. 7, no. 12, hal. 159–168, 2020, doi: 10.13106/JAFEB.2020.VOL7.NO12.159.
[11] J. Almeida dan T. C. Gonçalves, "A systematic literature review of investor behavior in the cryptocurrency markets," *Journal of Behavioral and Experimental Finance*, vol. 37. 2023, doi: 10.1016/j.jbef.2022.100785.
[12] S. Tanwar, N. P. Patel, S. N. Patel, J. R. Patel, G. Sharma, dan I. E. Davidson, "Deep Learning-Based Cryptocurrency Price Prediction Scheme with Inter-Dependent Relations," *IEEE Access*, vol. 9, hal. 138633–138646, 2021, doi: 10.1109/ACCESS.2021.3117848.
[13] V. Troster, A. K. Tiwari, M. Shahbaz, dan D. N. Macedo, "Bitcoin returns and risk: A general GARCH and GAS analysis," *Financ. Res. Lett.*, vol. 30, hal. 187–193, 2019, doi: 10.1016/j.frl.2018.09.014.
[14] A. Trozze *et al*., "Cryptocurrencies and future financial crime," *Crime Science*, vol. 11, no. 1. 2022, doi: 10.1186/s40163-021-00163-8.
[15] Y. Yue, X. Li, D. Zhang, dan S. Wang, "How cryptocurrency affects economy? A network analysis using bibliometric methods," *International Review of Financial Analysis*, vol. 77. 2021, doi: 10.1016/j.irfa.2021.101869.
[16] Z. Zhang, H. N. Dai, J. Zhou, S. K. Mondal, M. M. García, dan H. Wang, "Forecasting cryptocurrency price using convolutional neural networks with weighted and attentive memory channels," *Expert Syst. Appl.*, vol. 183, 2021, doi: 10.1016/j.eswa.2021.115378.
[17] H. Zhao dan L. Zhang, "Financial literacy or investment experience: which is more influential in cryptocurrency investment?," *Int. J. Bank Mark.*, vol. 39, no. 7, hal. 1208–1226, 2021, doi: 10.1108/IJBM-11-2020-0552.
[18] L. Yan, N. Mirza, dan M. Umar, "The cryptocurrency uncertainties and investment transitions: Evidence from high and low carbon energy funds in China," *Technol. Forecast. Soc. Change*, vol. 175, 2022, doi: 10.1016/j.techfore.2021.121326.
[19] P. Tzouvanas, R. Kizys, dan B. Tsend-Ayush, "Momentum trading in cryptocurrencies: Short-term returns and diversification benefits," *Econ. Lett.*, vol. 191, 2020, doi: 10.1016/j.econlet.2019.108728.
[20] D. I. Okorie dan B. Lin, "Crude oil price and cryptocurrencies: Evidence of volatility connectedness and hedging strategy," *Energy Econ.*, vol. 87, 2020, doi: 10.1016/j.eneco.2020.104703.
[21] A. Attarzadeh dan M. Balcilar, "On the dynamic return and volatility connectedness of cryptocurrency, crude oil, clean energy, and stock markets: a time-varying analysis," *Environ. Sci. Pollut. Res.*, vol. 29, no. 43, hal. 65185–65196, 2022, doi: 10.1007/s11356-022-20115-2.
[22] M. Bartoletti, S. Lande, A. Loddo, L. Pompianu, dan S. Serusi, "Cryptocurrency scams: Analysis and perspectives," *IEEE Access*, vol. 9, hal. 148353–148373, 2021, doi: 10.1109/ACCESS.2021.3123894.
[23] E. Badawi dan G. V. Jourdan, "Cryptocurrencies emerging threats and defensive mechanisms: A systematic literature review," *IEEE Access*, vol. 8. hal. 200021–200037, 2020, doi: 10.1109/ACCESS.2020.3034816.
[24] J. Mattke, C. Maier, L. Reis, dan T. Weitzel, "Bitcoin investment: a mixed methods study of investment motivations," *Eur. J. Inf. Syst.*, hal. 1–25, 2019, doi: 10.1080/0960085X.2020.1787109.
[25] M. La Morgia, A. Mei, F. Sassi, dan J. Stefa, "Pump and Dumps in the Bitcoin Era: Real Time Detection of Cryptocurrency Market Manipulations," *Proceedings - International Conference on Computer Communications and Networks, ICCCN*, vol. 2020-Augus. 2020, doi: 10.1109/ICCCN49398.2020.9209660.
[26] M. Lee, L. Frank, dan W. IJsselsteijn, "Brokerbot: A Cryptocurrency Chatbot in the Social-technical Gap of Trust," *Comput. Support. Coop. Work CSCW An Int. J.*, vol. 30, no. 1, hal. 79–117, 2021, doi: 10.1007/s10606-021-09392-6.
[27] W. Hanif, H. U. Ko, L. Pham, dan S. H. Kang, "Dynamic connectedness and network in the high moments of cryptocurrency, stock, and commodity markets," *Financ. Innov.*, vol. 9, no. 1, 2023, doi: 10.1186/s40854-023-00474-6.
[28] M. Hashemi Joo, Y. Nishikawa, dan K. Dandapani, "Announcement effects in the cryptocurrency market," *Appl. Econ.*, vol. 52, no. 44, hal. 4794–4808, 2020, doi: 10.1080/00036846.2020.1745747.
[29] A. Hamzah, "Metode Penelitian & Pengembangan (Research & Development) Uji Produk Kuantitatif Dan Kualitatif Proses Dan Hasil Dilengkapi Contoh Proposal Pengembangan Desain Uji Kualitatif Dan Kuantitatif," *CV Literasi Nusantara Abadi*. CV Literasi Nusantara Abadi, hal. 80, 2021.